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| <b>CITY OF LAS VEGAS<br/>INTER-OFFICE MEMORANDUM</b>                       |   | <b>DATE:</b><br>April 11, 2022  |
| <b>TO:</b><br>Land Development Services<br>Department of Building & Safety |   | <b>FROM:</b><br>Albert Sung, P.E.<br>Flood Control Project Engineer<br>Department of Public Works |
| <b>SUBJECT:</b>  | Drainage Study for:<br><b>Summerlin Village 22 Lot N.O.P.</b> | <b>COPIES TO:</b><br>RCI Engineering  |
| <b>Cross Streets:</b>  | NWC Desert Foothills Dr. & Kindle Rise Way                    | Howard Hughes Company, LLC  |
| <b>File Number:</b>  | F:\Depot\DSMemos\DS5556A.doc                                  | Bart Anderson, P.E., DevCo  |
| <b>Parcel Number:</b>  | 137-23-115-001  | CCRFCD  |
| <b>Zoning Action:</b>  | 21-0727-TMP1  |   |
| <b>FEMA Flood Zone</b>   | YES NO <b>X</b>   |   |
| <b>Proposed Storm Drain</b>  | YES NO <b>X</b>   |   |

| HISTORY                    | DATE RECEIVED | DATE REVIEWED | COMMENTS           | REVIEW FEES     | FEES PAID Payment Trn # |
|----------------------------|---------------|---------------|--------------------|-----------------|-------------------------|
| 1 <sup>st</sup> Submittal  | 3/24/2022     | 4/11/2022     | See Comments Below | \$400.00        | 4703971: \$400          |
| <b>TOTAL FEES (LDDRS):</b> |               |               |                    | <b>\$400.00</b> | ----                    |

**REMARKS:**

The Drainage Study for the subject project has been reviewed and:

|          |  |
|----------|--|
|          | is approved subject to conformance to all City standards and the following conditions:         |
| <b>X</b> | must be resubmitted or supplemented including the following:                                   |
|          | is conditionally approved subject to Clark County Regional Flood Control District concurrence. |
|          | is conditionally approved subject to Clark County Public Works Department concurrence.         |

- The subject development is under the premise of flood protection by the improved perimeter streets, *Kettle Ridge Drive, Fleet Wing Avenue, Desert Foothill Drive, Kindle Rise Way* and the associated storm drain facilities. No occupancy permit of the residential units will be issued prior to the substantial buildout of the perimeter facilities.
- The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

- If the development of **Unit 2** is more than one year after the final approval of this drainage study, a drainage study update will be required to address the current situation.

4. **Figure 5: Ultimate Condition Basin Map:** The area of basin N.O.P. shown on the Ultimate condition does not match the referenced N.O.P. Basin from the Master Conceptual Drainage Study for Summerlin West Village 22 (DS 5005). 14.52 Ac
5. **Figure 5: Ultimate Condition Basin Map:** For *Hydraulic Section 1*, the exhibit shows a slope of 0.50%, but the provided flowmaster uses a slope of 0.64%. Resolve the inconsistency.
6. **Figure 5: Ultimate Condition Basin Map:** For *Hydraulic Section 5*, the exhibit shows a velocity of 7.40 fps, but the provided flowmaster calculates a velocity of 7.49 fps.
7. The proposed DI #4 appears to be deeper than 10'. All storm drain inlets that are more than 10'-deep require a special structural detail and calculations. Submit structural design and calculations to *City Building & Safety Department* for review and approval prior to the final approval of the drainage study.
8. Locations where storm water flow will surface run between private lots are to be designated a Public Drainage Easement. For such as Lots 40, 41, and 42 if cross lot drainage is anticipated, sidewalk underdrains are required to convey flow. Provide a typical lot drainage detail and clearly identify the required public drainage easements (privately maintained) across the lots in the next submittal.
9. The following finish floors do not meet the Regional Flood Control District minimum criteria of twice the Q<sub>100</sub> depth of flow up to 18-inches above the water surface (CCRFCD Manual Section 304.4.E.1) or 6-inch minimum above the highest adjacent top of curb (CCRFCD Manual Section 1602 304.4.E.1). The following finish floors should be revised, or alternate flood protection provided.

| LOT       | ADJ TC  | FF SHOWN | FF REQUIRED |
|-----------|---------|----------|-------------|
| 3         | 3417.26 | 3417.36  | 3417.76     |
| 25        | 3417.69 | 3417.81  | 3418.19     |
| 26        | 3417.69 | 3416.81  | 3418.19     |
| 27        | 3417.69 | 3415.81  | 3418.19     |
| 31        | 3406.82 | 3406.96  | 3407.32     |
| 37        | 3390.64 | 3390.70  | 3391.14     |
| 40        | 3382.56 | 3382.83  | 3383.06     |
| 41 (GFF)  | 3380.19 | 3380.23  | 3380.51     |
| 87        | 3394.59 | 3394.74  | 3395.09     |
| 131 (GFF) | 3372.86 | 3372.79  | 3373.24     |
| 142       | 3394.59 | 3372.83  | 3395.09     |
| 143       | 3394.59 | 3373.83  | 3395.09     |
| 144       | 3379.42 | 3374.83  | 3379.92     |
| 145       | 3379.42 | 3378.90  | 3379.92     |
| 146       | 3379.42 | 3380.90  | 3379.92     |
| 147       | 3387.07 | 3382.90  | 3387.57     |
| 148       | 3387.07 | 3389.18  | 3387.23     |
| 149       | 3387.07 | 3391.18  | 3387.23     |
| 150       | 3394.85 | 3392.52  | 3395.01     |

As an alternate each lot must be discussed in the drainage study, shown to be flood protected, and any necessary flood improvements shown on the grading plan.

10. **Sheet G-2:** Portion of Common element **CE-E** behind *Stone Agave Street* must also be dedicated as a Public Drainage Easement to be Privately Maintained by the HOA. Clearly identify on the grading plan and dedicate and record as such in the Final Map.
11. **Sheet G-4:** Portion of Common element **CE-H** behind *Stone Perch Street* must also be dedicated as a Public Drainage Easement to be Privately Maintained by the HOA. Clearly identify on the grading plan and dedicate and record as such in the Final Map.
12. **Sheet D-1: Detail Section 12:** The retaining wall at the property line must provide a minimum of 3-course 8"-thickness solid grouted CMU above the adjacent grade.
13. **UNIT 2: Sheet D-1: Detail Section 6:** The wall at the property line must provide a minimum of 3-course 8"-thickness solid grouted CMU above the adjacent grade.
14. All proposed wrought iron fence must utilize RTC Uniform Standard Drawing 425.S1.
15. The engineer must provide a table on the grading plans that shows a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected.
16. Private streets must be public drainage easements. Provide a note on the grading plans "Note: All private streets are P.U.E., Public Sewer Easements, and Public Drainage Easements to be privately maintained by HOA."
17. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

**NOTE:** Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the Nevada Division of Environmental Protection a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

**END OF REMARKS**  
HDR/AYS

T/R/S: T20S/R59E/23  
AREA K-23